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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/370,981	08/10/1999	YUICHIRO OGAWA	104018	8747

25944 7590 06/22/2004

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EXAMINER	
FISCHER, JUSTIN R	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/370,981	OGAWA, YUICHIRO	
	Examiner	Art Unit	
	Justin R Fischer	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4 and 6-10* is/are pending in the application.

4a) Of the above claim(s) *6-8 and 10* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4 and 9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 20, 2004 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 2, 4, and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As currently amended, the claims require a carcass "that is not continuous with the pair of bead portions". To establish for support for this language, applicant points to the fact that the radial carcass and the bead portions are made of two separate materials. However, the mere fact the carcass and the bead are formed of different materials does not provide support to define them as

not being continuous. This is particularly evident in view of Ueyoko (US 5,885,387, of record). In this instance, Ueyoko specifically describes embodiments in which the carcass and the bead portions are formed of different materials but are substantially continuous (Column 5, Lines 50-64). It is further noted that the original disclosure (specification and drawings) is completely silent with respect to the ends of the carcass portions in relation to the bead portions and as such, the proposed language constitutes new matter.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 2, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata (JP 6-191238, of record) in view of Ueyoko (US 5,885,387, of record). Shibata and Ueyoko are applied in the same manner as set forth in Paper Number 19, Paragraph 3. It is noted that this rejection is maintained in light of the 112, 1st Paragraph rejection set forth above.

As best depicted in Figures 1 and 2, Shibata is directed to a pneumatic, radial tire construction for passenger cars having a pair of rectangular bead cores 3A, 3B in each bead portion such that they are adjacent to each other in the widthwise direction. The reference also depicts a carcass structure 4 having a roundtrip return portion that (a) extends from an inside of the tire toward an outside of the tire, (b) is located through a

side face of the axially innermost bead core, (c) extends from an inside of the tire toward an outside thereof, and (d) covers at least a radially innermost steel wire arrangement of said axially innermost bead core. However, the reference, in describing the carcass structure, is completely silent with respect to the use of a single, continuous cord. Ueyoko, on the other hand, describes a radial, pneumatic tire for passenger cars in which an endless carcass cord ply is employed. The use of such a carcass structure increases bead durability and contributes to the reduction of tire weight, both of which are desirable in all tires, wherein only the expected results would be achieved in modifying the carcass structure of Shibata in view of Ueyoko. As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the carcass structure of Shibata from a single, continuous cord structure, in view of Ueyoko, as further detailed below.

With respect to claim 2, Figures 1 and 2 of Shibata depict the return end of the roundtrip return portion as being sandwiched between the respective bead cores.

Regarding claim 9, applicant requires that the roundtrip return portion of the carcass ply cord have multiple, overlapping terminal parts. Ueyoko, in describing this unique carcass design, discloses the use of a multiplicity of folding points, which is analogous to "multiple, overlapping terminal parts". The use of such a carcass design further enhances the bead durability, while promoting the weight reduction of the tire. The reference describes this turnup structure in Column 2, Line 10, saying the carcass cord ply is provided with a multiplicity of folding points arranged in the tire's

circumferential direction at both outer ends of the cord ply. The turnup structure is additionally depicted in Figure 3.

6. Claims 1, 4, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakigi (JP 05016620, newly cited) in view of Slegenthaler (EP 0583615) and optionally in view of Ueyoko and Pouilloux (US 3,815,652, newly cited). As best depicted in Figures 1 and 2, Kakigi discloses a pneumatic tire construction having a carcass structure 6 and a pair of rectangular bead cores 1a, 1b, wherein said carcass structure is defined by a main portion that is adjacent and axially inward of the innermost bead core 1a and a turnup portion (roundtrip return portion) that is adjacent and axially outward of the outermost bead core 1b. In this instance, the main carcass portion is wrapped around the radially innermost portions of each of the respective bead cores and turned upward to form the turnup portion. While not expressly described as such, the carcass structure of Kakigi would be expected to be formed as a ply containing a plurality of reinforcing cord elements. However, it is extremely well known in the tire industry to form the carcass from a continuous cord as opposed to a ply in order to eliminate the presence of cut ends and separation failure- this is a problem that is widely existent due to the carcass turnup ends being exposed at the turnup end. Slegenthaler (Column 1, Lines 35-50) provides one example of such a construction in which a continuous cord is used to define the carcass structure and is wrapped around a bead assembly- as required by the claimed invention, the continuous cord defining the carcass is not continuous with the bead portions. Ueyoko (Column 1, Lines 10-56) and Pouilloux (Column 1, Lines 5-32) are optionally applied since they expressly recognize

the benefits associated with a carcass structure formed of a continuous cord as opposed to a ply. Thus, one of ordinary skill in the art at the time of the invention would have found it obvious to form the carcass of Kakigi from a continuous cord to obtain the benefits detailed, there being a reasonable expectation of success in forming the tire of Kakigi in the manner described above.

It is noted that the carcass/bead assembly in the bead portions of Kakigi and Slegenthaler are extremely similar in that they are both directed to a carcass structure that is wrapped around a bead assembly from the axially inside of the tire. Furthermore, the critical issue of Kakigi is the placement of a hard rubber layer between the innermost and outermost bead cores 1a,1b- the reference is completely silent as the form of the carcass structure. As such, one of ordinary skill in the art at the time of the invention would have been motivated to form the carcass of Kakigi as a continuous cord to eliminate the presence of cut ends, thereby improving tire durability (eliminates separation failure).

Regarding claim 4, Figure 1 of Kakigi depicts a terminal part of the turnup portion (roundtrip return portion) as being arranged along the axially outer side face of the axially outermost bead core.

As to claim 9, Slegenthaler depicts a common structure of a carcass formed of a continuous cord in which the terminal parts overlap with each other at a given pitch along the circumference of the bead portion.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 2, 4, and 9 have been considered but are moot in view of the new ground(s) of rejection. Applicant contends that the carcass and bead portions of Ueyoko are continuous while the amended claims require the above noted components to be separated (not continuous). It is agreed that the carcass and bead of Ueyoko are continuous and as such, a separate rejection has been provided in view of Slegenthaler. This rejection recognizes the well-known formation of a continuous cord carcass structure in which the carcass and bead portions are not continuous. Additionally, the previous rejection involving Ueyoko has been maintained in view of the 112, 1st Paragraph rejection set forth above.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin Fischer

June 17, 2004

JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300